



The Envision® Guidance & Rating System for Sustainable Infrastructure

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Goal: Sustainable and Resilient Communities



Sustainable development is...

“...development that meets the needs of the present without compromising the ability of future generations to meet their own needs.” - Brundtland Commission Report 1987

Envision is a Joint Collaboration



ISI Founding Organizations:



LEED Rating System

- Rating system for buildings
- Focus on comfort and health of building occupants
- Not applicable to civil infrastructure (roads, bridges, pipelines, etc.)



What Types of Infrastructure Does Envision Rate?



ENERGY

Geothermal
Hydroelectric
Nuclear
Coal
Natural Gas
Oil/Refinery
Wind
Solar
Biomass



WATER

Potable water distribution
Capture/Storage
Water Reuse
Storm Water Management
Flood Control



WASTE

Solid waste
Recycling
Hazardous Waste
Collection & Transfer



TRANSPORT

Airports
Roads
Highways
Bikes
Pedestrians
Railways
Public Transit
Ports
Waterways



LANDSCAPE

Public Realm
Parks
Ecosystem Services
Natural Infrastructure













INFORMATION

Telecommunications
Internet
Phones
Data Centers
Sensors

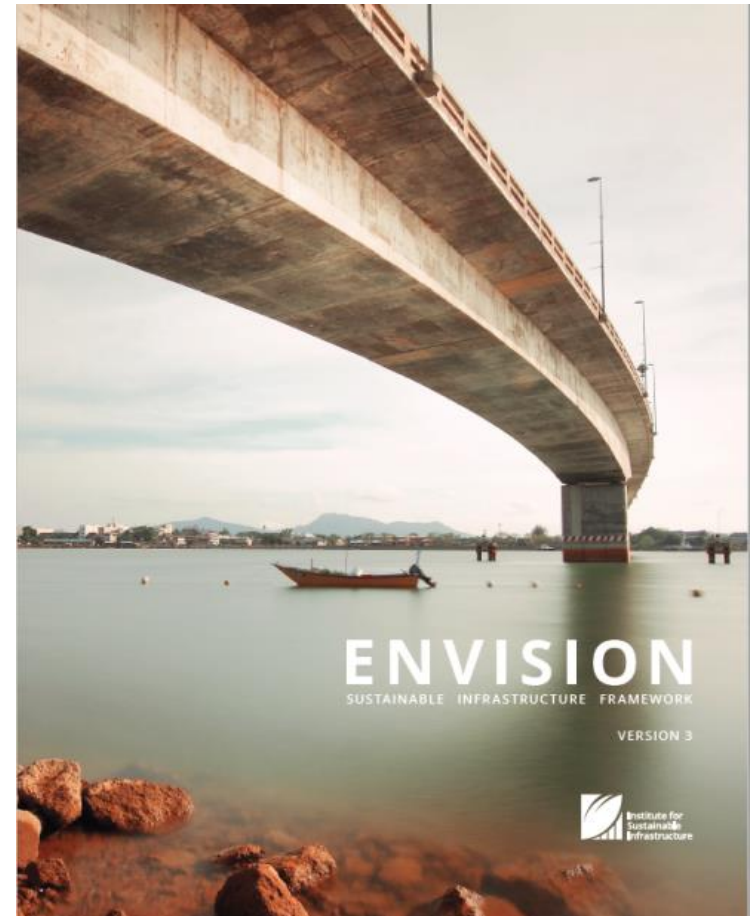
Why Use Envision?

- Apply best practices
- Incorporate triple bottom line
- Be consistent, transparent, and accountable

			Improved	Enhanced	Superior	Conserving	Restorative	Maximum Points
	Wellbeing	Q01.1 Improve Community Quality of Life	2	3	10	10	20	200
		Q01.2 Enhance Public Health & Safety	2	7	12	16	20	
		Q01.3 Improve Construction Safety	2	5	10	14	—	
		Q01.4 Minimize Noise & Vibration	1	3	6	10	12	
		Q01.5 Minimize Light Pollution	1	3	6	10	12	
		Q01.6 Minimize Construction Impacts	1	2	4	8	—	
	Quality of Life	Q02.1 Improve Community Mobility	1	3	7	11	14	200
		Q02.2 Encourage Sustainable Transportation	—	5	8	12	16	
		Q02.3 Improve Access & Wayfinding	1	5	9	14	—	
		Q02.4 Advance Equity & Social Justice	3	6	10	14	18	
		Q03.2 Preserve Historic & Cultural Resources	—	2	7	12	18	
		Q03.3 Enhance Visual & Local Character	1	3	7	11	14	
	Community	Q03.4 Enhance Public Space & Amenities	1	3	7	11	14	182
		L01.1 Provide Effective Leadership & Commitment	2	5	12	18	—	
		L01.2 Foster Collaboration & Teamwork	2	5	12	18	—	
		L01.3 Provide for Stakeholder Involvement	3	6	9	14	18	
		L01.4 Pursue Byproduct Synergies	3	6	12	14	18	
		L02.1 Establish a Sustainability Management Plan	4	7	12	18	—	
	Leadership	L02.2 Plan for Sustainable Communities	4	6	9	12	18	196
		L02.3 Plan for Long-Term Monitoring & Maintenance	2	5	8	12	—	
		L02.4 Plan for End-of-Life	2	3	8	14	—	
		E01.1 Stimulate Economic Prosperity & Development	3	6	12	20	—	
		E02.2 Develop Local Skills & Capabilities	2	4	8	12	16	
		E03.3 Conduct a Life-Cycle Economic Evaluation	5	7	10	12	14	
	Economy	R01.1 Support Sustainable Procurement Practices	3	6	9	12	—	232
		R01.2 Use Recycled Materials	4	6	9	16	—	
		R01.3 Reduce Operational Waste	4	7	10	14	—	
		R01.4 Reduce Construction Waste	4	7	10	16	—	
		R01.5 Balance Earthwork On-Site	2	4	6	8	—	
		R02.1 Reduce Operational Energy Consumption	6	12	18	26	—	
	Materials	R02.2 Reduce Construction Energy Consumption	1	4	8	12	—	190
		R02.3 Use Renewable Energy	5	10	16	20	24	
		R02.4 Commission & Monitor Energy Systems	3	6	12	14	—	
		R03.1 Preserve Water Resources	3	5	7	9	12	
		R03.2 Reduce Operational Water Consumption	4	9	13	17	22	
		R03.3 Reduce Construction Water Consumption	1	3	5	8	—	
	Resource Allocation	R03.4 Monitor Water Systems	1	3	6	12	—	200
		W01.1 Preserve Sites of High Ecological Value	2	6	12	16	20	
		W01.2 Provide Wetland & Surface Water Buffers	2	5	10	16	20	
		W01.3 Preserve Prime Farmland	—	2	8	12	16	
		W01.4 Preserve Undeveloped Land	3	8	12	16	24	
		W02.1 Reclaim Brownfields	11	13	16	19	22	
	Siting	W02.2 Manage Stormwater	2	4	9	17	24	232
		W02.3 Reduce Pesticide & Fertilizer Impacts	1	2	5	9	12	
		W02.4 Protect Surface & Groundwater Quality	2	5	9	14	20	
		W03.1 Enhance Functional Habitats	2	5	9	16	18	
		W03.2 Enhance Wetland & Surface Water Functions	3	7	12	18	20	
		W03.3 Maintain Floodplain Functions	1	3	7	11	14	
	Natural World	W03.4 Control Invasive Species	1	2	6	9	12	190
		W03.5 Protect Soil Health	—	3	4	5	6	
		C01.1 Reduce Net Embodied Carbon	5	10	16	20	—	
		C01.2 Reduce Greenhouse Gas Emissions	8	13	18	22	26	
		C01.3 Reduce Air Pollutant Emissions	2	4	9	14	18	
		C02.1 Avoid Unsustainable Development	3	6	8	12	16	
	Emissions	C02.2 Assess Climate Change Vulnerability	8	14	18	20	—	190
		C02.3 Evaluate Risk and Resilience	11	18	24	26	—	
		C02.4 Establish Resilience Goals and Strategies	—	8	14	20	—	
		C02.5 Maximize Resilience	11	18	20	26	—	
		C02.6 Improve Infrastructure Integration	2	5	9	13	18	
	Climate and Resilience							1,000

How is Envision Offered?

- Pre-assessment checklist
- Guidance manual
- Online scoresheet



Envision v3: 64 Credits in 5 Categories



QUALITY OF LIFE

13 CREDITS



LEADERSHIP

11 CREDITS



RESOURCE ALLOCATION

15 CREDITS



NATURAL WORLD

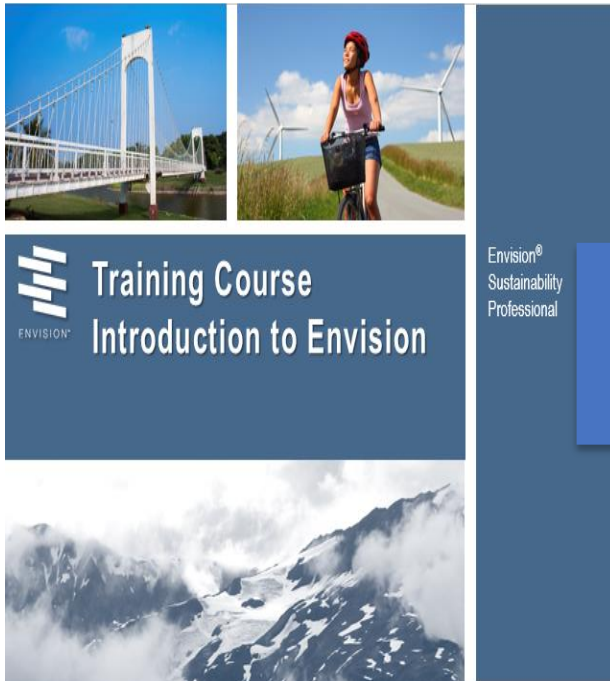
14 CREDITS



CLIMATE AND RESILIENCE

11 CREDITS

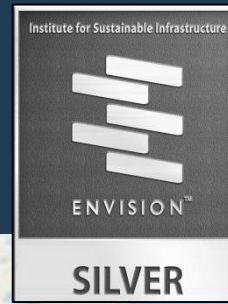
Professional Credential



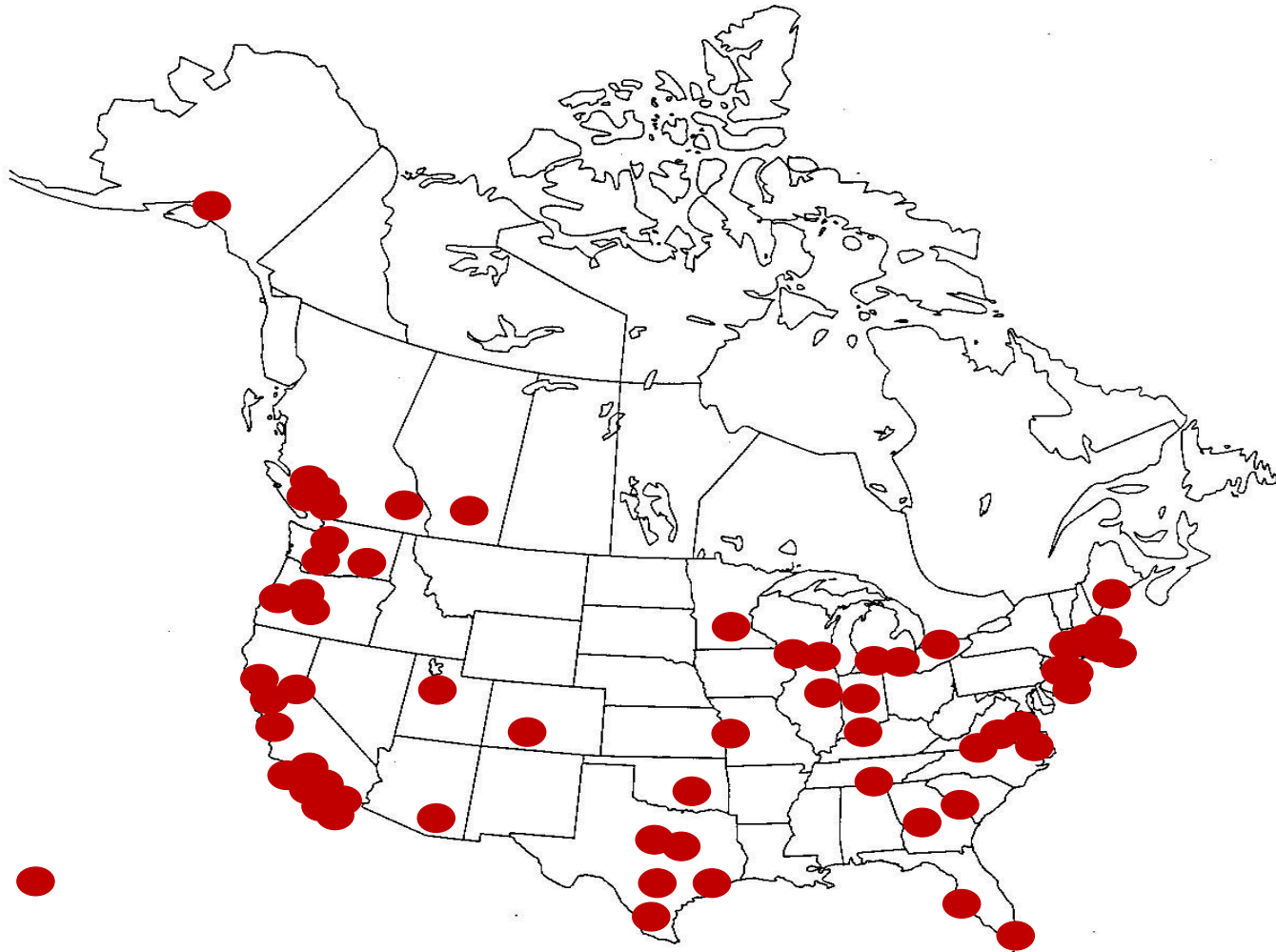
Online Exam



Project Awards



Communities Using Envision



Communities Using Envision

ENGINEERING

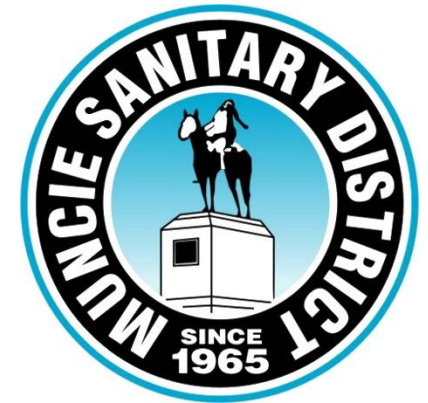


CITY OF LOS ANGELES

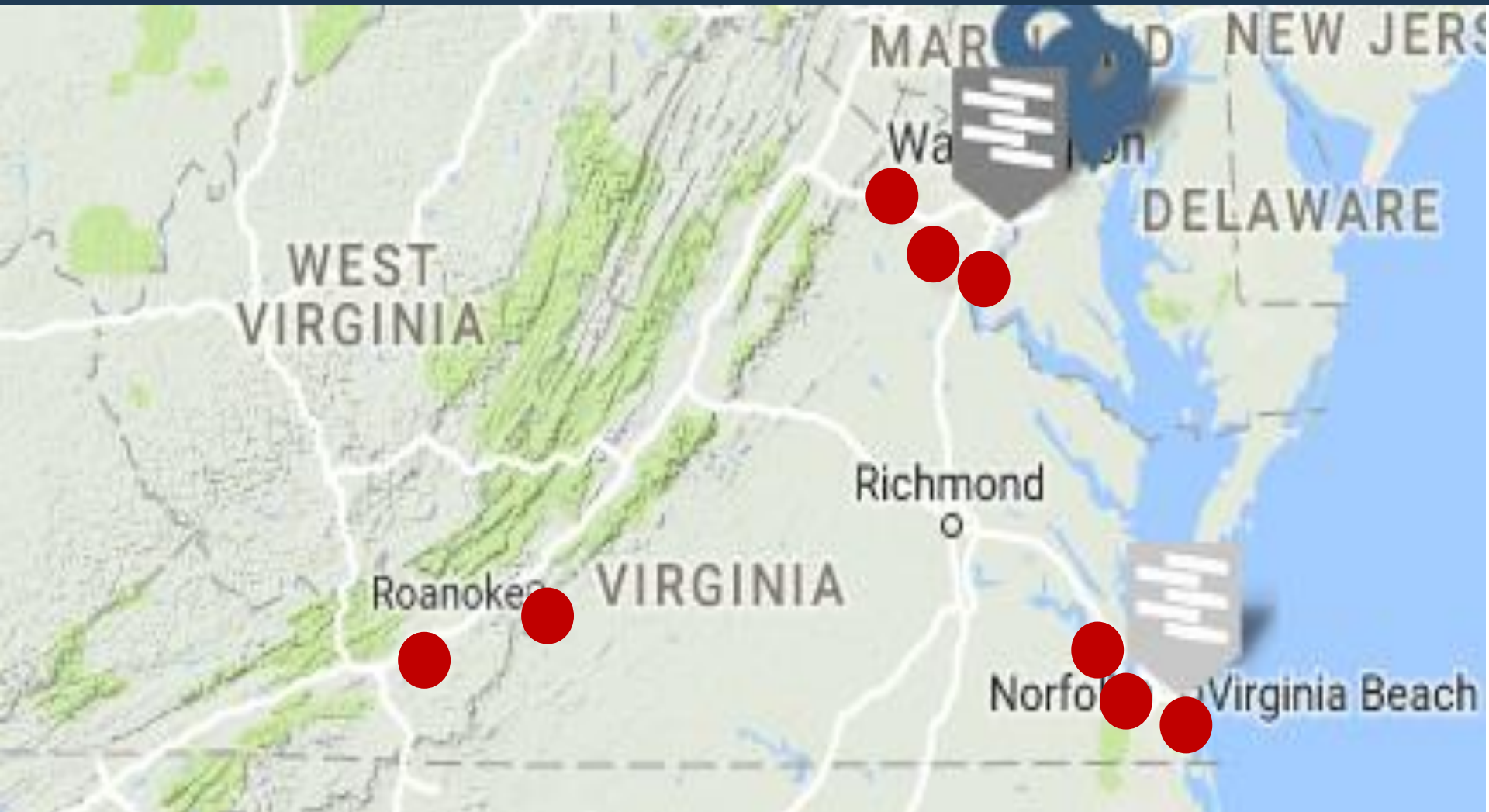
Madison Metropolitan
Sewerage District



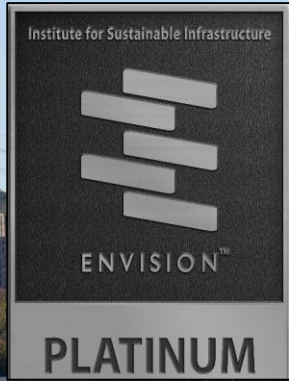
Department of
Design and
Construction



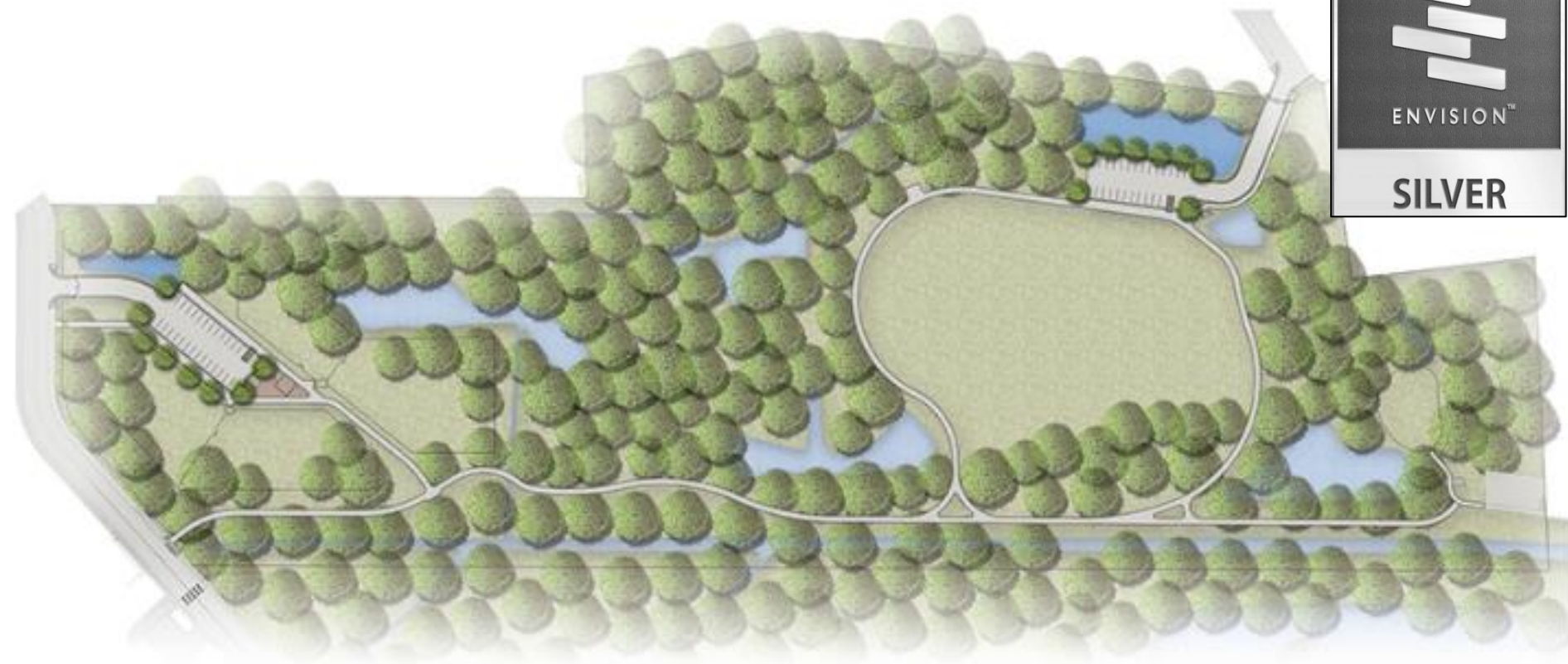
Envision in Virginia



Alexandria Renew Enterprises Nutrient Management Facility Earns Platinum



Virginia Beach Marshview Park Phase 1 Earns Silver



How Can Envision Help Falls Church?

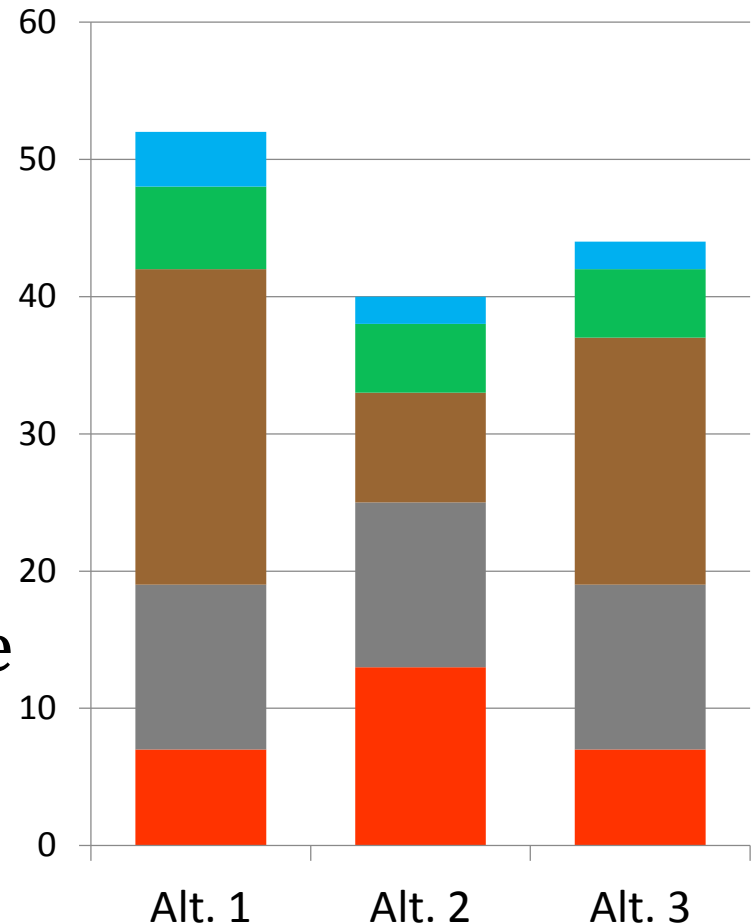


Translate Goals into Actions on Infrastructure Projects

Document & Measure Progress Towards Community Goals

Envision is a Tool for...

- ✓ Planning
- ✓ Project design
- ✓ Project construction
- ✓ Operations and maintenance
- ✓ Outreach



You can use Envision to...

- ✓ Promote education on sustainability & structure outreach
- ✓ Quantify sustainability, including soft benefits
- ✓ Optimize benefits across triple bottom line
- ✓ Incorporate life cycle planning
- ✓ Compare different types of infrastructure projects
- ✓ Encourage collaboration across departments or jurisdictions
- ✓ Identify benchmarks, set targets, and track performance

The background of the slide is a photograph of a wind farm. In the foreground, the large white blades of a wind turbine are visible, extending from the left side. In the background, several other wind turbines are spaced out across a body of water under a clear sky.

Envision®

Translating Goals into Project Actions



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